

Remarks

Claims 1-20 were in the application as initially examined and subject to restriction. Claim 1 is amended without adding new matter. Clams 5 and 12-20 are deemed withdrawn. Claims 1-4 and 6-8 remain in the application for examination, and further consideration and examination thereof is respectfully requested.

Objections to the Disclosure

The Examiner objects to the specification because page 2 does not belong. Applicant has been unable to locate the error to which the Examiner refers, either in any papers submitted to the Office or elsewhere. The published application (US 2006/0073751) is accurate and contains no extraneous pages. To the extent that any official document to which the Examiner refers contains a page other than what is published in US 2006/0073751, the Examiner is authorized to delete it from the specification.

Objections to the Claims

The Examiner objects to claim 1, requiring the word “layer” to follow “upper” in line 2. Applicant has amended claim 1 in accord with the requirement.

Claim Rejections – 35 U.S.C. §103

(1) Claims 1, 3, 4, and 8 stand rejected under 35 U.S.C. §1(a) as being unpatentable over Mol ‘077 in view of Takada ‘895. The rejection is traversed.

The combination would not have been obvious. Mol ‘077 teaches a conveyor belt with standard light denier yarn for the middle warp yarns and suggests nothing about middle warp yarns being effectively straight and inelastic. Takada ‘895 teaches a safety belt which is highly energy absorbent during its initial non-recoverable *elongation* (Col 1, ll. 66-67), and thereafter subjected to recoverable or elastic *elongation*. (Col. 2, ll. 1-2). (Emphasis added) To accomplish this objective, Takada ‘895 teaches a single weave including both high *elongation* warp threads 1 and low *elongation* warp threads 3 (Col. 3, ll. 49-50) (Again, emphasis added).

The low elongation warp threads may be alike or different, but in any event are such that they will break to absorb kinetic energy after initial *elongation* (Col., 4, ll. 4-6). Moreover, the warp threads are *twisted* polyester yarns (Col. 4, ll. 19-20) (Again, emphasis added). The result is a safety belt with a load elongation curve showing *more elongation* for less load than prior belts. (Col. 4, ll. 24-48) (Again, emphasis added). This is asserted to be *far superior*. (Col. 4, ll. 46-48). (Again, emphasis added). In a second embodiment, Takada '895 teaches that core yarns 33 have the characteristics and qualities of the warp threads 3. (Col. 5, ll. 28-32). In other words, the core yarns 33 have low elongation relative to other warp yarns ("less elongation than the warps 26 and 27") (Col. 5, line 28), but nevertheless elongate until sufficient tension ruptures them. Before rupture, the core threads *neck out or elongate* to absorb kinetic energy. (Col. 5, ll. 33-38) (Again, emphasis added). The belt has up to 20 percent *elongation*. (Col. 5, line 57) (Again, emphasis added).

The inevitable conclusion is that one of ordinary skill in the art, seeking to obtain a Mol belt with middle warp yarns being effectively straight and inelastic for a conveyor belt, would not look to Takada '895 for its teaching of warp threads that may have less elongation than other warp threads, but nevertheless are *twisted* polyester yarns that *elongate* prior to *rupture* to absorb *kinetic energy* in a *safety belt*. Takada '895, in other words, teaches away from Mol '077.

But even the combination, if tenable, does not reach the claim. The warp threads of Takada '895 are *twisted* and *elongate*. The claimed middle warp yarns are straight and effectively inelastic. Any combination of Mol '077 and Takada '895 does not reach the invention of claim 1. Claim 1 is therefore patentable over the alleged combination.

And inasmuch as claims 3, 4, and 8 depend, directly or indirectly from claim 1, they are likewise patentable over the alleged combination.

(2) Claims 2, 6 and 7 stand rejected under 35 U.S.C. §1(a) as being unpatentable over Mol '077 in view of Takada '895 as applied to claims 1, 3, 4 and 8, and further in view of Munting '879 or Buyalos '326. The rejection is traversed.

The forgoing arguments regarding claims 1, 3, 4 and 8 pertain here. That alone is enough to warrant withdrawal of the rejection. Takada '895 does not teach inelastic middle warp yarns

to bear loads without twisting. In fact the warp threads of Takada '895 *elongate* (suggesting elasticity), and are *twisted*. (See above). Because claims 2, 6 and 7 all depend, directly or indirectly from claim 1, they are likewise patentable for the same reasons that claim 1 is patentable.

(3) Claims 1 and 3 stand rejected under 35 U.S.C. §1(a) as being unpatentable over Mol '077 in view of Koseki '440. The rejection is traversed.

Koseki '440 teaches a safety belt that addresses the same problem as Takada '895, to-wit: a belt that provides some initial elongation to absorb kinetic energy, whereupon warp yarns break, thereby permitting more elongation later. In fact the result is the same. See, for example Koseki's elongation chart (Fig. 3) with Takada's elongation chart (Fig. 5). Koseki '440 is cumulative to Takada '895, and therefore claim 1 is patentable over Koseki '440 for the same reasons it is patentable over Takada '895. And because claim 3 depends directly from claim 1, it is likewise patentable for the same reasons that claim 1 is patentable.

(4) Claims 2 and 6 stand rejected under 35 U.S.C. §1(a) as being unpatentable over Mol '077 in view of Koseki '440 as applied to claims 1 and 3, and further in view of Munting '879 or Buyalos '326. The rejection is traversed.

The forgoing arguments regarding claims 1 and 3 pertain here. That alone is enough to warrant withdrawal of the rejection. Because claim 3 depends directly from claim 1, it is likewise patentable for the same reasons that claim 1 is patentable.

(5) Claims 4 and 8 stand rejected under 35 U.S.C. §1(a) as being unpatentable over Mol '077 in view of Koseki '440 as applied to claims 1 and 3, and further in view of Takada '895. The rejection is traversed.

The forgoing arguments regarding claims 1 and 3 pertain here. That alone is enough to warrant withdrawal of the rejection. Because claim 3 depends directly from claim 1, it is likewise patentable for the same reasons that claim 1 is patentable.

Moreover, none of the references teach heat setting the warp yarns under tension. The tension referred to in Takada '895 has nothing to do with the manufacture of the *thread*. Rather, the reference is to the tension of the core threads *in the belt*.

(6) Claim 7 stand rejected under 35 U.S.C. §1(a) as being unpatentable over Mol '077 in view of Koseki '440 as applied to claims 1 and 3 in view of Munting '879 or Buyalos '326 as applied to claims 2 and 6, and further in view of Takada '895. The rejection is traversed.

The forgoing arguments regarding claims 1 and 3 pertain here. That alone is enough to warrant withdrawal of the rejection. Because claim 3 depends directly from claim 1, it is likewise patentable for the same reasons that claim 1 is patentable.

Moreover, none of the references teach heat setting the warp yarns under tension. The tension referred to in Takada '895 has nothing to do with the manufacture of the *thread*. Rather, the reference is to the tension of the core threads *in the belt*.

Inasmuch as any asserted combination of references does not render the claims obvious under 35 U.S.C. §103 and no rejection under any other ground is established, the claims are believed patentable, and early notice of allowability is respectfully requested.

Any questions about the foregoing can be directed to the undersigned and the Examiner is invited to resolve any remaining issues by telephone or by email.

Respectfully submitted,

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/Joel E Bair/

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